

INTRODUCTION

This report fulfills the San Jose/Santa Clara Water Pollution Control Plant's (Plant) NPDES Permit requirement to submit an annual report to the San Francisco Bay Regional Water Quality Control Board (Regional Water Board). Unless otherwise noted, it covers activities that occurred during the period January 1, 2007 to December 31, 2007 under Permit Order R2 2003-0085, Provision E. 19 (Annual Status Reports).

The report is structured into two distinct sections that are stand-alone reports to facilitate review.

1. 2008 Action Plan Workplan, Contingency Plan and the 2007 South Bay Action Plan Activity Report
2. Annual Pollution Prevention (P2) Report. The annual P2 report summary includes pollutant priorities, sources of pollutants, pollution prevention progress, and plans for the next year.

The City of San Jose (City) supports environmental and regulatory programs that provide efficient and effective services to the community by linking environmental excellence to economic prosperity and a high quality of life.

EXECUTIVE SUMMARY

The City operates the San Jose/Santa Clara Water Pollution Control Plant on behalf of its tributary agencies. In addition, the City is a member of the Santa Clara Valley Urban Runoff Pollution Prevention Program.

Since 1994, the City has managed its pollution prevention and water quality programs using the guidelines established in the Clean Bay Strategy (CBS). During 2007, San Jose adopted a Green Vision with aggressive goals to achieve a sustainable future:

1. Create 25,000 Clean Tech jobs as the World Center of Clean Tech Innovation.
2. Reduce per capita energy use by 50 percent.
3. Receive 100 percent of our electrical power from clean renewable sources.
4. Build or retrofit 50 million square feet of green buildings.

5. Divert 100 percent of the waste from our landfill and convert waste to energy.
6. Recycle or beneficially reuse 100 percent of our wastewater (100 million gallons a day)
7. Adopt a General Plan with measurable standards for sustainable development.
8. Ensure that 100 percent of public fleet vehicles run on alternative fuels.
9. Plant 100,000 new trees and replace 100 percent of our streetlights with smart, zero-emission lighting.
10. Create 100 miles of interconnected trails.

In addition, San Jose adopted an implementation workplan for the Urban Environmental Accords, a global initiative to promote sustainability at the local level. Several of the actions in the Urban Environmental Accords benefit watershed activities (see <http://www.sanjoseca.gov/esd/urban-accords.asp>).

The following watershed activities are summarized in the South Bay Action Plan and Annual Pollution Prevention Reports.

SOUTH BAY ACTION PLAN

The average Plant Influent flow (PIF) for 2007 was 113 million gallons per day (mgd), a 7.5% decrease from last year's average of 122 mgd – while the average effluent flow was 102 mgd, an 8.5% decrease from last year's average of 111 mgd. The Average Dry Weather Effluent Flow (ADWEF, the lowest of the three consecutive months between May and October) for 2007 was 95 mgd – the lowest in 30 years – and a 7.5% reduction from 2006. The linear trend since 2000 indicates that overall PIF continues to decline.

Water Recycling

The South Bay Water Recycling Program (SBWR) delivered a record average 14.4 million gallons per day (mgd) during the dry weather season. The City continues discussions with the Santa Clara Valley Water District (Water District) for future partnerships. In addition, SBWR continues outreach and reliability improvements for the recycled water system. One of the reliability improvements was the construction of the Zone 3 reservoir consisting of two 2.75 million gallon tanks (5.5 million gallon total) and 5,500 linear feet of 20-inch mains. Construction of the Guadalupe Gardens project is anticipated to be completed in 2008.

Water Conservation

The City placed links on its website to educate the public about local and statewide water issues. Specifically, the City linked to the Water District's campaign to promote Water Wise Housecalls and a second link to a statewide

initiative by water agencies called “California’s Water: A Crisis we can’t ignore.” The City continues to work cooperatively with the Water District in promoting residential water conservation and has seen an increase in requests for the Water Efficient Technologies program that provides incentives for commercial and industrial customers who install water saving technologies. Since 1986, these conservation efforts have reduced residential per capita indoor water use by 28%. Overall indoor water use has remained flat even as the residential population has grown.

Outdoor water use showed a small increase of 4 percent.

Plant Master Planning Effort

The City is in the process of developing a Plant Master Plan (Plan) that will provide a roadmap for the next 30 years of capital improvement projects, facilities, operations, and financing for the San Jose/Santa Clara Water Pollution Control Plant. The Plan will address public health and environmental protection issues while ensuring the Plant’s continued reliable and affordable operation on behalf of the City and the Tributary Agencies. The Plan will incorporate the Opportunities and Constraints Report for the Plant’s bufferlands and the Infrastructure Conditions Assessment for the Plant’s core facilities. The San Jose City Council approved the consultant contract to support this effort in November 2007. Public and stakeholder outreach will begin during 2008. The Plan is projected to be completed in 2011.

Plant Reliability Improvements Project

The Plant’s Reliability Improvements Project is the largest addition to the facility in 20 years was substantially completed. The project includes the creation of a second, parallel headworks, a new raw sewage pump station, a supplemental filter influent pump station, and an 18 million gallon emergency overflow storage basin. The project allows the Plant to handle short-duration flows up to 400 mgd and will allow the Plant more time to respond and correct critical failures before any environmental impacts can occur. In addition, the Plant has launched an asset management program and is pursuing capital projects to rehabilitate digesters and the electrical system.

Regional and Sustainable Leadership Initiatives

The City is an active participant in regional initiatives that protect and enhance the watershed, including the Santa Clara Basin Watershed Management Initiative (WMI) and the South Bay Salt Pond restoration project. City staff continued serving as Vice-Chair and WMI coordinator. City staff chair the Land Use Subgroup and co-chair the new POTW coordination subgroup. In addition, City staff continues to actively participate in the stakeholder forum of the State and Federal salt pond restoration project. The planning process for

former salt pond A18 owned by the City will strive to be consistent with the salt pond restoration project.

The City, as a principal member of Bay Area Clean Water Agencies (BACWA) and the Regional Monitoring Program (RMP) both financially and with in-kind services. In addition, the City supports the Integrated Regional Water Management Plan (IRWMP) effort.

Additional efforts in 2007 to promote effective, sustainable management initiatives include the continued development of an Environmental Management System (EMS) in conformance with ISO 14001:2004 for the Municipal Water System and the Plant.

ANNUAL POLLUTION PREVENTION REPORT

The pollution prevention (P2) program's mission and work extend beyond minimum permit requirements. Program features include elements such as a broad programmatic scope that supports pollutant reductions benefiting a variety of media (sanitary sewer, stormwater, biosolids, solid waste, and air), allows for resourceful collaboration taking advantage of partnering opportunities to solve regional issues, provides accessible outreach that actively works to create awareness and change behavior, and is responsive and adaptive enabling the best use of limited resources to proactively address issues instead of reacting only when it is mandated.

The City is committed to striving for excellence in its pollution prevention efforts. Highlights for 2007 pollution prevention activities are summarized below.

Mercury

The City worked collaboratively with regional partners on a public education program offering residents throughout the Bay Area an opportunity to exchange their glass fever thermometers for a digital one free of charge. The primary objective of the thermometer exchange events was to educate the public and employees about day to day pollution prevention activities and the secondary objective was to collect and properly dispose of mercury fever thermometers. The City hosted five exchange events in which more than 500 residents and City employees participated. A total of 1,346 mercury thermometers were collected. The City plans to continue hosting thermometer exchanges in 2008.

The City completed the Mercury Fate and Transport Study designed to examine the fate and transport of mercury through the Plant processes. Results show a highly efficient removal rate for total mercury (approximately 99%) correlated with the removal of solids. Methylmercury, the more

bioavailable form of mercury, is removed at a rate of 97%. The final report was submitted to the Water Board in December 2007.

Additional pollution prevention activities funded by solid waste programs include supporting the County household hazardous waste (HHW) residential drop off program that collected 1,170 pounds of elemental mercury, 82,211 pounds of fluorescent lights, and 65,860 pounds of batteries.

Cyanide

In response to elevated influent and effluent cyanide concentrations at the Plant, the City of San José revitalized its surveillance monitoring program in December of 2004. Results of the monitoring program found that an industrial user was discharging high concentrations of heavy metals and cyanide. Evidence and data collected from further investigation was referred to the City Attorneys' Office and the Santa Clara District Attorney's Office for enforcement action. In 2007, a settlement that includes civil penalties, cost recovery, and a mechanism for ensuring future violations do not occur, was placed on the record before the Santa Clara County Superior Court. Final details of the settlement will be included in the 2008 Annual Report.

Emerging Pollutants

Through hosting the Safe Medicine Disposal Days in 2006, the City learned that large pharmaceutical collection events are costly and resource intensive. As a result, the City's focus has shifted from one-day collection events to establishing a more convenient and sustainable alternative for pharmaceutical collection. City staff has participated in discussions of a regional pharmaceutical collection pilot program, anticipated to begin in 2008. Until an ongoing program has been implemented, residents will continue to be directed to the Santa Clara County Household Hazardous Waste (www.hhw.org) program for disposal of unwanted pharmaceuticals.

The City also participates on the California Product Stewardship Council in promoting potential producer responsibility legislation for pharmaceuticals at the state level. The City supported Senate Bill 966 that was signed into legislation by Governor Schwarzenegger in October 2007. This legislation will begin the process of establishing a state-wide solution for disposal of unused and expired prescription pharmaceuticals by creating model programs that allow retailers of pharmaceutical drugs and other organizations to accept and collect these materials for disposal. The California Integrated Waste Management Board will implement grant funding for these model programs. The City will monitor for grant funding and program implementation opportunities. To promote product stewardship, San Jose was the first city in the country to specify EPEAT-registered computers and added EPEAT requirements into its computer contract four months before the first products appeared on the EPEAT registry. With help from the EPA and the Green Electronics Council, the team incorporated EPEAT requirements into a March

2006 purchasing contract for computers, and has since bought more than 2,000 EPEAT-registered desktop computers and monitors. Through its purchases, the city reduced energy use by 803,000 kWh -- the electricity needed to power 75 U.S. average households per year, reduced greenhouse gases equivalent to removing 53 cars from the road per year, reduced hazardous waste by 5.36 tons, avoided 168 pounds of toxic materials and saved \$73,957.

Household Hazardous Waste (HHW) Drop-Off Facility EIR Approval

The City continues efforts to relocate an HHW drop-off site to a potentially permanent location. On November 15, 2006, the previous San Jose HHW facility was closed and decommissioned to appropriate space for the San Jose Central Service Yard expansion project. An environmental review of potential new locations was administered, with a full Environmental Impact Report (EIR) developed and publicly circulated from April through May 2007. In June 2007, the San Jose Planning Commission certified the EIR, with the City Council subsequently accepting and approving the relocation project. The new drop-off facility is scheduled to open as an interim facility at this time in late 2008.

Local Limits Update and Sewer Use Ordinance Changes

In June 2007, the Regional Water Board approved the City's 2006 Industrial Waste Discharge Local Limits Update report. In December 2007, the City Council approved a revised Sewer Use Ordinance that incorporated the changes to the Local Limits as identified in the report as well as other required changes to the Sewer Use Ordinance. A discussion of the approved local limits and Sewer Use Ordinance changes is included of Section 3 of this report.

Sector Loading Study Final Results

The City completed the Sector Loading Study in late 2007 and results are presented in Section 3 of this report. During 2007, further analysis and evaluation was performed in order to finalize the sector loading estimates. In addition, follow up work was done on one of the commercial sampling sites where higher than anticipated levels of copper were found during the sector loading sampling in 2006. The City investigated upstream dischargers to determine the representative concentration of copper in the wastewater for one of the study's sample locations and performed additional sampling at that location.

General Pollution Prevention Outreach Efforts

In addition to pollutant specific outreach, the City produces general outreach materials and participates in events that promote fundamental water quality

management and pollution prevention messages that address more than one specific pollutant. The following are highlights of the City's general outreach efforts in 2007:

Three issues of the Tributary Tribune newsletter were produced and distributed to all industrial users (IUs) in the Plant's service area. The annual Industrial Users Academy workshop was attended by 27 participants from 17 companies. A tour of the Plant was reincorporated into the IU Academy this year.

In September, the City actively participated in National Pollution Prevention Week. The week-long celebration included a display in the lobby of City Hall, a Resource Fair in the City Hall Rotunda with over 16 City environmental programs and initiatives providing information and tools to attendees on how to prevent pollution in their daily lives, a biologist led walk along the Guadalupe River where attendees learned about the affects of urban activities upon the riparian corridor, and a presentation on global warming. In addition, the City Council adopted a proclamation declaring Pollution Prevention Week in San José.

Go Green Initiative

In November 2007, San Jose co-hosted the Go Green Initiative's third annual Earth Summit, and was named the first "International Go Green City of the Year" at the event. Approximately 300 educators from across the nation came and learned methods of incorporating green concepts into the classroom. Ninety-five (95) of the participants included San Jose parents, teachers, students and principals. The Go Green Initiative is the nation's fastest growing fully comprehensive environmental action plan for schools. It promotes environmental stewardship on campuses from elementary schools through universities.

Regional Efforts

The City is involved in several regional efforts:

- As a founding member of the WMI and in partnership with the Santa Clara Valley Urban Runoff Pollution Prevention program, the City participated in the Watershed Watch Campaign designed to deliver watershed protection and pollution prevention messages.
- As active members in BACWA and the Bay Area Stormwater Management Agencies Association (BASMAA), San Jose participated in residential and commercial outreach to minimize chemical usage and educate the target audience about proper disposal practices of chemicals and fats, oil, and grease.
- The City also actively participates in the Bay Area Pollution Prevention Group (BAPPG) to deliver pollution prevention messages to residents and businesses.

Youth Education

Youth education was also an integral part of the City's program in 2007. The City's youth watershed education team develops and delivers watershed and pollution prevention messages to youth and youth educators through grants, curricula aligned to state standards, teacher workshops, and partnerships with other agencies and organizations.

2008 Work Plan Highlights

Future activities will include further development of the City's Dental Amalgam Program, enhancement to the City's comprehensive Fats, Oils, and Grease (FOG) program, further research, collaboration, and implementation of a pilot collection program for pharmaceuticals, and continued collaboration with other agencies to promote legislation supporting Product Stewardship models to address pharmaceutical disposal and other pollutants of concern.